

# POWERSWITCH

## DC TRACTION POWER CONTROL COMPONENTS

### CURRENT SENSING ELECTRONIC SWITCH COPPER RIDGE SYSTEMS - 31103 SERIES

COPPER RIDGE SERIES 31103 ELECTRONIC SWITCHES WERE DEVELOPED BY A POWERSWITCH AFFILIATE TO MONITOR THE LOAD CURRENT ON 600-1500VDC NO-LOAD BREAK MOTOR OPERATED DISCONNECTS. THESE NORMALLY OPEN SOLID STATE SWITCHES CLOSE WHEN THE FLUX AROUND THE DISCONNECT SWITCH BLADES IS LESS THAN THAT DEVELOPED BY A SMALL AMOUNT OF LOAD CURRENT FLOWING IN EITHER DIRECTION. WHEN CONNECTED TO POWER A STANDARD 110 VDC CONTROL RELAY AN EFFECTIVE INTERLOCK IS PROVIDED TO PREVENT OPENING THE HV DISCONNECT WHEN LOAD CURRENT IS MORE THAN CAN BE SAFELY INTERRUPTED BY THE QUICK BREAK CONTACTS. THE ELECTRONIC SWITCH OPENS TO DE-ENERGIZE THE INTERLOCK RELAY WHEN THE LOAD CURRENT FLOWING THRU THE BLADES IS HIGHER THAN A SET AMOUNT. BECAUSE THE CONTROL RELAY USED IS NORMALLY OPEN AS COMPARED TO THE NORMALLY CLOSED TYPE REQUIRED FOR TYPICAL VOLTAGE SENSOR INTERLOCKS, THE NO-LOAD BREAK SWITCH CANNOT BE OPENED UNDER HEAVY LOAD EVEN WITH A FAILED INTERLOCK RELAY.

### FEATURES

HEAT RESISTANT PHENOLIC CASE ISOLATES SENSOR AND LOW VOLTAGE CONTROL CIRCUIT CONNECTIONS FROM HIGH VOLTAGE LIVE PARTS.

USES HIGH SENSITIVITY HALL SENSOR WITH INTEGRATED MAGNETIC CONCENTRATORS WHICH CANNOT BE DESTROYED BY A STRONG MAGNETIC FIELD.

LATEST VERSION HAS TEST JACKS TO ALLOW MEASURING STRAY MAGNETISM TO FACILITATE FINE TUNING FIELD ADJUSTMENT AS INSTALLED.

MONITORS CURRENT FLOW IN EITHER DIRECTION.

NO HIGH VOLTAGE OR NEGATIVE RETURN CONNECTION REQUIRED.

NO HIGH VOLTAGE DC FUSES REQUIRED.

### SPECIFICATIONS

#### SENSOR CHARACTERISTICS:

Can be set to measure currents as low as 50 amps flowing in either direction.

#### LOAD CIRCUIT:

Output Voltage: 100-108 VDC.

Output Current: 100 milliamps maximum.

#### POWER INPUT:

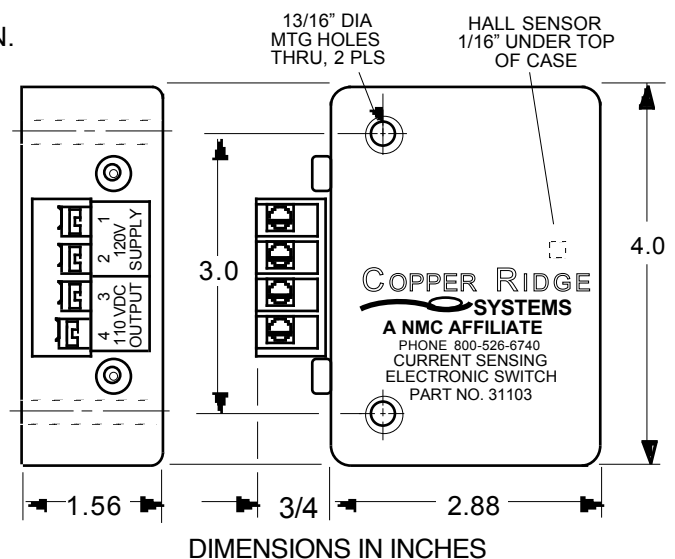
80-130 Volts AC/DC, 10 Watts Maximum.

#### TERMINALS:

#6 Screws with Wire Clamps.

#### MOUNTING:

(2) #10 x 2 inch long machine screws.



## POWERSWITCH, Inc.

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